

The Weather Whisper

WHAT'S INSIDE?

➤ Snow and Fog and Wind, oh my! A review of January 2024

The Great Wallop

The staff of NWS Des Moines

After a mild December, January roared to life with an exceptional two weeks containing multiple snow storms, blizzard conditions, a snow squall, and extreme cold, followed by a bout of persistent fog ([see graphic of all headlines issued](#)). In the 11 days from January 8-18 of this month, Des Moines recorded an astounding 27.0" of snowfall. That is second only to the 27.7" that fell in Dec-Jan 1941-42 (which included the highest 24-hour snowfall on

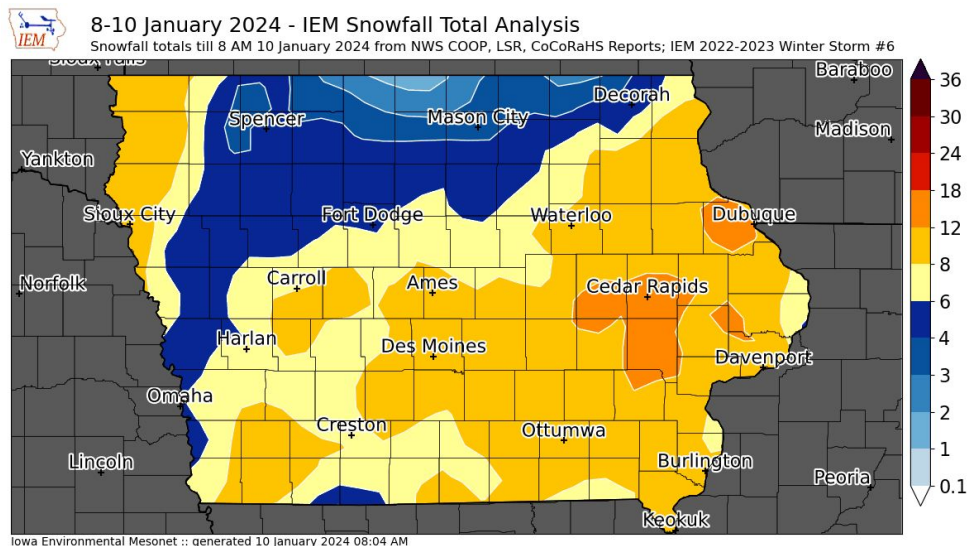
record, 19.8" over New Year's). Perhaps most impressively, the snowfall in the 11 days of Jan 8-18, 2024 would in itself qualify as the fifth-snowiest calendar month on record at Des Moines. We actually received an additional 0.2" during the first seven days of this month, bringing the monthly total to 27.2". Meanwhile, Waterloo is at 25.1" for the month, of which 24.9" fell over the same 11 days (from the 8th-18th).

Top-5 snowiest calendar months ever:

Des Moines	Waterloo
1. Jan. 1886 - 37.0"	1. Dec. 2000 - 33.9"
2. Dec. 2000 - 30.3"	2. Feb. 2019 - 31.1"
3. Dec. 2009 - 28.2"	3. Dec. 2009 - 27.3"
4. Mar. 1912 - 28.0"	4. Jan. 2024 - 25.1"
5. Jan. 2024 - 27.2"	5. Dec. 2010 - 24.7"

Round 1: The Heavy Snow of January 8-9th

Heavy snow fell across central into eastern Iowa from Monday evening into Tuesday (January 8-9, 2024). Accumulations of 6" or more were common over the southeast two-thirds of the state with amounts from 12-15" from Waterloo toward Cedar Rapids & Iowa City.



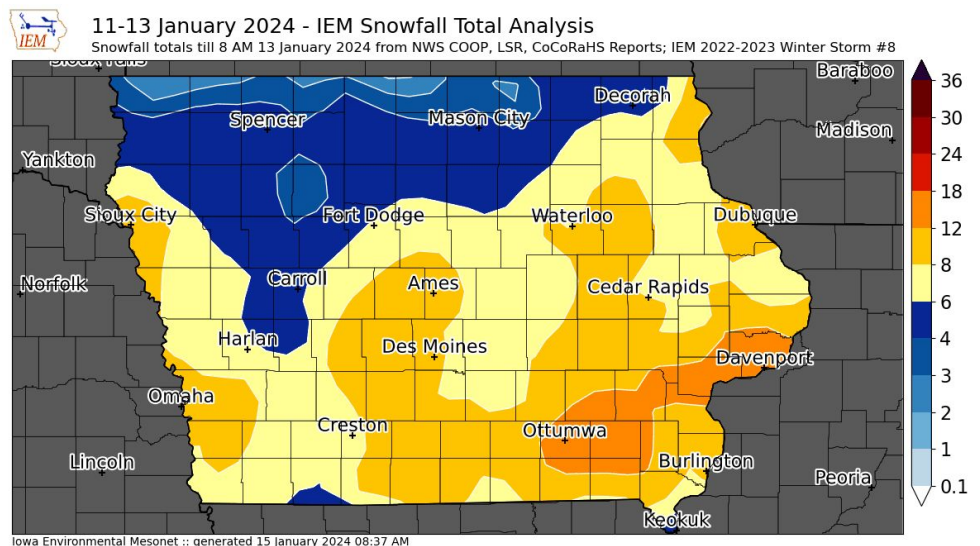
The Waterloo Airport crushed its previous record daily snowfall for 1/9 with 11.5" of new snow (storm total 13.8"), which broke the previous record of 3.8" set in 1957. Winds increased on January 9 with gusts of 40-50mph resulting in blowing snow which caused significant travel problems along I-80 from Des Moines to the Illinois border. Read more in the event summary found [HERE](#).

Round 2: The Snow Squall

Between larger systems, a quick moving wave moved across the area on January 10th with 1-2" of additional snow accumulation. Despite the low totals, this wave packed a punch. Around 7:30pm reports began coming in on social media of thunder and lightning with snow - first in Stuart, then in Adel, Dexter, and Menlo. Radar continued to show a broad area of light precipitation, however over the next 30-60 minutes the front edge began to sharpen into a narrow and intense band. A local fire department reported that visibility in the band was under a quarter mile. This prompted a snow squall warning - the second ever issued by NWS Des Moines. Snow squall warnings are meant to alert drivers of rapidly deteriorating travel conditions with quick onset of reduced visibility and intense snow. As the band passed across the Des Moines metro, a quick 1" of snow occurred in around 20 minutes. This band continued east down I-80 and the snow squall warning was reissued to cover the hazard. While no accidents were reported in the squall, traffic slowed to a crawl and many on the interstate traveled with their hazard lights on.

Round 3: The Blizzard of January 11-14th

An upper level low pressure system brought heavy snow, blizzard conditions, and frigid cold to the state to end an otherwise already busy week! This third onslaught of wintry weather came in waves, starting with heavy snowfall on



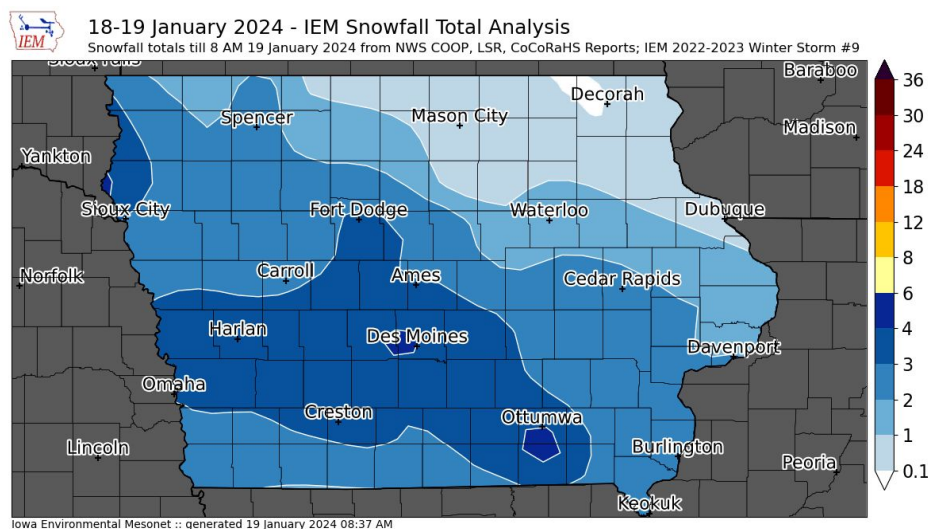
on the night of January 11th lasting through January 12th. Accumulations were highest over southern and southeastern Iowa where amounts ranged from 10 to 14 inches, then steadily tapered off further north and west where 6 to 8 inches was more common. One staff member even stayed the night at the office the night of January 11th to avoid the dangerous travel conditions.

The heavier snowfall rates moved out of the area by midday Friday, January 12th, but the impacts had only just begun with light snow and gusty winds continuing periodically through Friday and into Saturday, January 13th. The residual snowpack from the winter storm earlier in the week and powdery snow falling from this system resulted in blizzard conditions as gusty winds picked up Friday. Widespread wind gusts of 35 to 45 mph were observed throughout Iowa, with some locations gusting over 50 mph at times. Whiteout conditions developed on roadways as blowing and drifting snow made travel nearly impossible for much of Friday and Saturday. These poor travel conditions resulted in multiple road closures, including stretches of I-80, with many more roads deemed impassable by the Iowa Department of Transportation. Travel conditions didn't fully improve until the morning of Sunday, January 14th when wind gusts finally diminished.

In addition to the heavy snow and blizzard conditions, this system brought down an Arctic air mass which plummeted temperatures well below zero. Wind chills during the blizzard dropped to the -10s to -20s°F on Friday, then -30s to -40s°F by Saturday evening, creating life-threatening dangerous cold to go along with this winter storm. Read more about this event on our [webpage](#).

Round 4: The Powder of January 18th

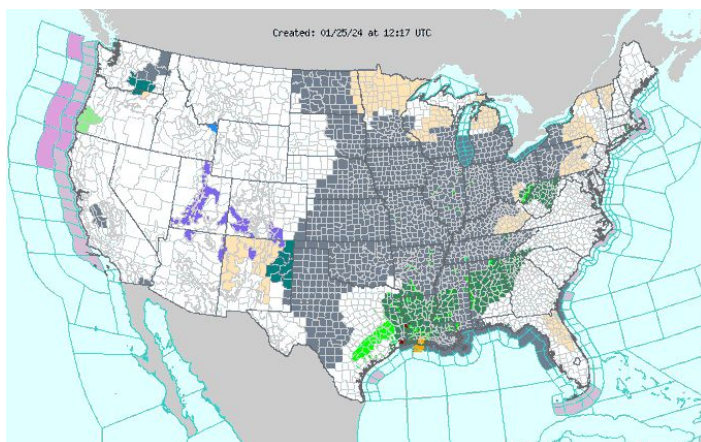
Bitter cold settled across Iowa the week of January 15th with wind chills persistently in the -20s to -30s°F. To cap off the week, another exceptionally light, powdery snow fell the afternoon and evening of January 18th. Over the course of a few hours, a band of 2-4" of fresh powder covered much of central Iowa. All this on top of the previous snowpack that had yet to melt in the extreme cold.



The Fog of January 23-31

Conditions have improved the last 10 days of the month with temperatures warming back to the 30s. And while that warm up has helped to slowly chip away at a deep snowpack, it has also resulted in a rather stubborn fog over the area as the warmer air overrides the cold ground. A

Dense Fog Advisory has been issued each day for January 23 through January 31. In some cases the fog has enveloped large portions of the country, from the southern border with Mexico all the way to the northern border with Canada! [This actually set a record for number of counties in the US under a dense fog advisory at the same time!](#)



On the Cover:
Large drifts developing in front of NWS Des Moines on January 12, 2024.



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